

Preliminary Program

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15th Biennial
Symposium on Visibility

May 15 – 16, 2000



Symposium Location:

National Academy of Sciences
2101 Constitution Ave. NW
Washington, DC

Sponsored by:

Committee on Visibility
Committee on Signing and Marking Materials
Committee on Traffic Control Devices
Committee on Vehicle User Characteristics
Committee on User Information Systems

T R B

On May 15-16, 2000, the Transportation Research Board's Committee on Visibility, Committee on Signing and Marking Materials, Committee on Traffic Control Devices, and Committee on User Information Systems are jointly sponsoring this Symposium on Visibility. This Symposium will be the 15th in a series of symposia that have been held biennially since 1968.

REGISTRATION: Because the symposium is required to be self-supporting, the registration fee applies to all who attend. The fee is \$125.00 for those who register by April 20th and \$175.00 for those who register after this date or at the symposium. Do not send registration forms after May 8th - bring them to the Symposium for on-site registration. The fee includes continental breakfast on both days, the Monday evening reception and dinner, lunch on Monday, coffee breaks, and administrative expenses related to conducting the symposium. The attached registration form along with the registration fee should be returned to TRB by April 20th. Payment must be made by check, payable to the **TRB/Visibility Symposium** in U.S. funds drawn on a U.S. bank, by credit card (Visa, MasterCard or American Express), by purchase order, or by international money order. A registration confirmation will be sent in advance, time permitting. Cancellation received in writing by May 1 will be refunded in full. After May 1, there will be a \$50 processing fee. No refunds will be issued after May 8. For further information please contact Robert Hilterbrand at 202/334-2960.

TECHNICAL TOUR — The "Smart Road", Blacksburg VA *(Separate Registration Required)*

A new highway, called the "Smart Road", is under construction in the Blacksburg Virginia area with completion scheduled for March 2000. It is a cooperative effort between Virginia DOT, the Center for Transportation Research at Virginia Tech, and FHWA. The road is designed to serve as a full-scale research facility to test, evaluate, and validate various systems. Among the systems to be evaluated are roadway lighting systems with either dry or controlled wet pavement, traffic control devices, and UV-A headlamp systems. Details on the complete project can be found at:

http://www.ctr.vt.edu/research_tools/smartroad/

Preliminary Tour Schedule

May 16	11:00 am	Depart to Blacksburg, VA
	4:00 pm	Overview of Smart Road Project at Control Center
	8:00 pm	Night tour of facility
	evening	Stay at <i>Four Points Sheraton-Blacksburg</i>
May 17	8:30 am	Depart Blacksburg for return to Washington
	~2:00 pm	Arrive Washington DC

The \$65.00 Technical Tour registration fee will cover the cost of the chartered bus trip departing Washington, DC on May 16 to Blacksburg, VA and returning to Washington (arriving in the afternoon on May 17). All other costs: lodging, meals, etc. are the responsibility of the participant. *Because of the nature of the tour, space is limited and pre-registration is required.*

HOTEL RESERVATIONS:

All hotel accommodations are the responsibility of the participant. Arrangements for all accommodations must be made individually by all attendees. Room reservation requests **should not** be sent to TRB. Once the room blocks are sold out or after April 20 (whichever comes first), rooms may not be available.

For Symposium: TRB has arranged a block of rooms for \$123 (plus taxes) at the *State Plaza Hotel*, 217 E. St. NW, Washington, DC, 202/861-8200. Contact the hotel directly prior to April 20 and identify yourself as with the TRB/2000 Visibility Symposium to receive this special Symposium rate.

For Technical Tour: Contact the *Four Points Sheraton-Blacksburg* (formerly Marriott), 900 Prices Fork Rd, Blacksburg, VA , 540-552-7001 and identify yourself as with the National Academies Travel Block to receive the \$55 rate (plus taxes) by April 20

2000 Visibility Symposium – Preliminary Program

Monday, May 15, 2000

8:00-8:30 a.m.	<i>Registration and Coffee</i>	
8:30-8:45 a.m.	Introductions	
8:45-10:15 a.m.	Session 1	
8:45-9:15 a.m.	W. Adrian	On the Influence of Age on Vision Under Driving Conditions
9:15-9:45 a.m.	Schmidt-Clausen	Dynamic Glare in Motor Vehicle Lighting
9:45-10:15 a.m.	Schieber	Glare versus Conspicuity from Daytime Running Lights
10:15-10:45 a.m.	<i>Coffee Break, Individual Discussions</i>	
10:45 a.m.	Session 2	
10:45-11:15 a.m.	Schnell & Zwahlen	A Numerical Method for Optimizing Uppercase Alphanumeric Text in Traffic Sign Applications
11:15-11:45 a.m.	Garvey	State of the Art in Traffic Sign Legibility
11:45 - 12:15 p.m.	Hagiwara	Evaluation of the Visibility of Targets on a Road Using Digital Still Camera
12:15-1:15 p.m.	<i>Lunch, Individual Discussions</i>	
1:15-2:45 p.m.	Session 3	
1:15-1:45 p.m.	Sorensen	Visibility of Pavement Markings in Dry and Wet Conditions
1:45-2:15 p.m.	Multer, et al.	Evaluation of Four Patterns for Reflectorizing Rail Cars
2:15-2:45 p.m.	Carroll, et al.	Field Trials of Freight Car Reflectorization
2:45-3:15 p.m.	<i>Coffee Break, Individual Discussions</i>	
3:15-5:15 p.m.	Session 4	
3:15-3:45 p.m.	Schmidt-Clausen	A Model for Calculation of Nighttime Traffic Situations During Fog Periods
3:45-4:15 p.m.	Hagiwara	Background Luminance as a Function of Illuminance Conditions and Visual Range in Fog
4:15-4:45 p.m.	Lee	Design Principles and Guidelines for Icons Used on In Vehicle Displays
4:45-5:15 p.m.	Zwahlen, et al.	Influence of Pavement Marking Angular Systems on Visibility Predictions Using Computer Models
5:15-7:30 p.m.	Reception and Dinner – NAS Building	
7:30 –9:00 p.m.	Mid-year Meeting of TRB Committee on Visibility (A3A04)	

2000 Visibility Symposium – Preliminary Program (continued)

Tuesday, May 16, 2000

8:00-8:30 a.m.	<i>Coffee and Individual Sessions</i>	
8:30-10:15 a.m.	Session 5	
8:30-9:00 a.m.	Havard	Street Lighting is no Longer Just Footcandles
9:00-9:30 a.m.	Harms and Schieber	Daytime Visibility Benefits of Fluorescent Highway Sign Materials
9:30-10:00 a.m.	Zwahlen and Schnell	Detection of Negative Luminance Contrast Targets During Day and at Night Under Lowbeam Illumination
10:00-10:30 a.m.	Ananthanarayanan and Havard	New Roadway Lighting Techniques and Technologies -- Report on FHWA International Scanning Tour
10:30-10:45 a.m.	"Smart Road" Technical Tour orientation and organization	
10:45 – 11:00 a.m.	<i>Coffee Break and adjourn</i>	
11:00 a.m.-	Depart to hotel (pick-up luggage) and Technical Tour to Blacksburg, VA. Returning approximately 2:00 pm on Wednesday, May 17	

Note: Updates to this Preliminary Program, should they occur, will be posted on TRB's Website:

<http://www4.nationalacademies.org/trb/calendar.nsf>

Technical Program Co-Chairs:

Thomas Schnell, University of Iowa
Helmut Zwahlen, Ohio University

T r a n s p o r t a t i o n R e s e a r c h B o a r d
15th Biennial Symposium on Visibility
Monday, May 15 – Tuesday, May 16, 2000
National Academy of Sciences Building • Washington, DC

Registration Form

✓ **Yes! I will attend the Symposium.**

Mail future correspondence to (please type or print):

Name _____ Nickname for badge _____
Last First & Middle Initial

Affiliation _____

Address _____

City _____ State _____ Zip/Postal Code _____

Telephone (_____) _____ FAX (_____) _____ e-mail _____

Registration Fee (must accompany form)	Earlybird (by April 20)	After April 20 and On-site	Enclosed Payment (US funds drawn on US bank)
Symposium Fee (see hotel info below)	\$125 (does not include tour/hotel)	\$175 (does not include tour/hotel)	\$
Technical Tour (see hotel info below)	\$65 (does not include Symposium/hotel)	Not Available	\$

Total _____

☐ Check (payable to TRB) Check # _____

☐ VISA ☐ MASTERCARD ☐ AMERICAN EXPRESS

☐ Purchase Order # _____
(government agencies and universities only)

Card # _____

(TRB/NAS Federal ID: 53-0196932)

Expiration ____ / ____ Signature _____

Please register on-site after May 8. Cancellation received in writing by May 1 will be refunded in full. After May 1, there will be a \$50 processing fee. No refunds will be issued after May 8.

QUESTIONS? Contact Richard Cunard or Robert Hilterbrand, Transportation Research Board, 2101 Constitution Avenue, NW, Washington, DC 20418, 202/334-2960, FAX 202/334-2299, e-mail rhilterb@nas.edu

Hotel Accommodations for Symposium and Smart Road Technical Tour:

All hotel accommodations are the responsibility of the participant. Arrangements for all accommodations must be made individually by all attendees.

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Please complete all information, keep a copy for your records, and send form with payment by April 20 to:

TRB, Box 289, Washington, DC 20055 – or – FAX (202) 334-2299 [Credit Card Payments Only].